Comment on the proposed precedence of *Bagauda* Bergroth, 1903 (Insecta, Heteroptera, REDUVIIDAE) over *Pleias* Kirkaldy, 1901
(Case 3435; see BZN **65**: 93–96)

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I support the proposed conservation of the name *Bagauda* Bergroth, 1903 over *Pleias* Kirkaldy, 1901. I agree with Rédei (BZN **65**: 94) that adherence to the principle of priority in this case would require many new combinations for species currently contained in *Bagauda* and such an action would not help the stability of nomenclature in EMESINAE. Furthermore, as Rédei documented, the name *Bagauda* has been extensively used in recent literature, unlike its senior synonym *Pleias*.

Comment on the proposed conservation of usage of *Drosophila* Fallén, 1823 (Insecta, Diptera)
(Case 3407; see BZN **64**: 238–242, **65**: 55–56; 137–149)

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Our application regarding designation of *Drosophila melanogaster* as the type species of the genus *Drosophila* (van der Linde et al., 2007) was expected to raise controversy even before it was published, and the variety of comments received in the first two issues of this bulletin in 2008 bears this expectation out (see Comments in BZN **65**(1–3)). Seven out of nine comments oppose our application, each for its own unique set of reasons, whereas several of them agree with other parts of our proposal.

The mission of the ICZN is 'achieving stability and sense in the scientific naming of animals' (http://www.iczn.org/Mission_vision.htm). If stability is intended in a narrow sense, focused solely on taxonomy (cf. Thomspon et al., 2008) our application should be rejected at once, as changes in genus names are normal occurrences for taxonomists, and such changes will not lead to instability in the strict taxonomic sense (cf. McEvey et al., 2008; BZN **65**: 147–150), but even though taxonomy and nomenclature are separate and unique fields, they are not isolated on their own islands, separated from biology at large (http://www.iczn.org/What_we_do.htm). Our proposed change of the type species to *Drosophila melanogaster* is intended to avoid large-scale confusion in the field at large about this, the most important model species in all of biology (cf. Polaszek, 2008; BZN **65**: 55). Our application therefore raises the crucial underlying question of whether stability should be preserved in its narrow sense (the field of taxonomy) or in a wider sense (the field of biology).

Unfortunately, several authors indicate that they feel we ask for an endorsement of a particular classification and classification paradigm (Gaimari, 2008; BZN **65**: 146–147; McEvey et al., 2008; BZN **65**: 147–150; O'Grady et al., 2008; BZN **65**: 141–144; Štys, 2008; BZN **65**: 144–145; Thompson et al., 2008; BZN **65**: 140–141). We wish to dispel that notion explicitly here. In our application, we presented our taxonomic and phylogenetic thought merely as one hypothesis for taxonomic revision of the large genus *Drosophila*, in order to illustrate the nomenclatural problem related to *Drosophila melanogaster*. The name *Drosophila melanogaster* can only be retained if the current paraphyletic situation remains unchanged or if the genera included in the lineage of the genus *Drosophila* are downgraded to subgenera. All other proposals, including ours, must address the desirability of the name change of *Drosophila melanogaster* to *Sophophora melanogaster*.

Although our wording led several readers to believe that we believed our treatment to be the definitive and only way to solve the problem, this was not at all our intention. McEvey et al. (2008) correctly understood what we meant to say: 'We acknowledge that there is a range of views about how to deal with the various groups of species in *Drosophila* but we feel that there is still much work to be done before the numerous species can be correctly reassigned. We feel that this can proceed more freely, with less constraint, if *melanogaster* is the type of *Drosophila*.' We agree completely with the argument that taxonomic thoughts and actions should be free from nomenclature (O'Grady et al., 2008; Štys, 2008; Thompson et al., 2008). In the case of the genus *Drosophila*, however, the problem of '*Sophophora melanogaster*' will constrain taxonomic thought (the classification system) to a greater or lesser extent. Our application, if accepted, will release taxonomists from this constraint.

Thompson et al. (2008) refer to *Stegomyia aegypti* as an example for why the application should be rejected, arguing that it is an identical situation in which a new name for a widely studied species did not cause nomenclatural instability. That is true in the narrow sense for the field of taxonomy but not for the field of biology at large.

The new name has not been accepted by the community at large and most recent (2007–2008) publications found in ISI's Web of Knowledge or Google Scholar, although they sometimes use *Aedes* (*Stegomyia*) *aegypti,* most frequently use just *Aedes aegypti*, the old name. After the proposed revision by Reinert and coworkers (2004), the editorial boards of the Journal of Medical Entomology, Annals of Tropical Medicine and Parasitology, Emerging Infectious Diseases, Journal of the American Mosquito Control Association, Journal of Vector Ecology, Medical and Veterinary Entomology, Transactions of the Royal Society of Tropical Medicine and Hygiene, Vector Borne and Zoonotic Diseases, and PROMED (Anonymous, 2005; Higgs, 2005; Weaver, 2005) rejected the proposed revision.

In the case of *Drosophila melanogaster*, if the biology community at large accepts the change of its generic name from *Drosophila* to *Sophophora*, as Prigent (2008; BZN **65**: 137–140) and Thompson et al. (2008) argue that it will, we would have no need to ask for the plenary power of the Commission to designate *D. melanogaster* as the type species of *Drosophila,* but extensive discussions with many *Drosophila* researchers indicate that a name change is likely to be ignored by many researchers not involved in the taxonomy of this genus. If it is, the result will be a discrepancy between drosophilid taxonomists and the other *Drosophila* researchers, leading to confusion and instability similar to that surrounding *Stegomyia aegypti* within the wider range of the biological sciences. With regard to this point, several others (McEvey et al., 2008; O'Grady et al., 2008; Polaszek, 2008; Štys, 2008) agree with us that the binomen *Drosophila melanogaster* should be preserved to prevent this large-scale confusion.

If the Commission rules in support of our application, the only taxonomic action that will automatically take place is synonymizing of *Sophophora* Sturtevant with *Drosophila* Fallén. This action produces a large, paraphyletic subgenus *Drosophila* revised, which includes the species presently belonging to the subgenera *Drosophila* and *Sophophora*, while the generic name of the species, *Drosophila*, remains unchanged. In this situation, taxonomists are free to propose any hypotheses (classification systems) they choose, but if the Commission rules against our application, taxonomic revision of the genus *Drosophila* is effectively prevented unless the community at large accepts *Sophophora melanogaster,* as suggested by Yassin (2008; BZN **65**: 55–56), Prigent (2008; BZN **65**: 137–140), and Thompson et al. (2008). Proposed hypotheses should be left to evaluation by the community of biology at large, and more acceptable ones will gradually be selected on the basis of their scientific evidence.

In summary, this case is unique in many ways, because the subject of the application is the most frequently used model system in science (aside from humans), to the point that the name *Drosophila* has become synonymous for many with *Drosophila melanogaster*. The legacy of this species is documented in over 40,000 scientific articles (*Web of Science* search) and used in many more places (Polaszek, 2008). To avoid large-scale instability for biology at large, we have proposed that *Drosophila melanogaster* be designated as the new type species for the genus before any revision of the genus is carried out. The need to revise the genus is something most drosophilid taxonomy and phylogeny researchers agree on (van der Linde et al., 2007; McEvey et al., 2008; O'Grady et al., 2008; Prigent, 2008; Yassin, 2008), but they disagree about when and how such a revision should be carried out. The

discussion of how to revise the genus is outside the scope of the Commission, however. We therefore request that the Commission accepts our application to preserve the name *Drosophila melanogaster* in order to avoid large-scale confusion in the biology community at large.

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Comment on the proposed precedence of the generic name *Ataenius* Harold, 1867 over *Aphodinus* Motschulsky, 1862 (Insecta, Coleoptera)

(Case 3377; see BZN **64**: 39–42)

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We are writing in support of the application by Howden & Smetana to give precedence to the generic name *Ataenius* Harold, 1867 over *Aphodinus* Motschulsky, 1862, whenever they are considered synonyms.

We have to point out, however, that the name *Ataenius* Harold, 1867 (type species *Ataenius scutellaris* Harold, 1867 by subsequent designation by Chapin, 1940, p. 12 and not Cartwright, 1974 as incorrectly indicated in the application) is also threatened by *Auperia* Jacquelin du Val, 1857 (type species *Scarabaeus stercorator* Fabricius, 1775 by subsequent designation by Dellacasa, 1988). The lectotype of *Scarabaeus stercorator,* designated by Landin, 1956, is in the Banks collection, at the Natural History Museum, London.

Jacquelin du Val (1857, p. 51) proposed *Auperia* as a replacement name for *Euparia* Erichson, 1847. He wrote: 'Este género fué creado por Erickson á expensas de los Aphodius. Como Lepelletier y Serville han empleado el nombre de Euparia para un género de Lamellicornes, y Schonherr él de Euparius para un género de curculionites, he creido oportuno cambiar el nombre de Euparia dado por Erickson en él de Auperia, su anagrama.' [This genus was created by Erickson as a replacement for *Aphodius*. As Lepelletier & Serville have used the name *Euparia* for a genus of Lamellicornes and Schonherr has used *Euparius* for a genus of curculionids, I thought it appropriate to replace Erickson's name *Euparia* with its anagram, *Auperia*]. Here 'Erickson' is clearly a *lapsus* for 'Erichson'. Erichson (1847) had

included three species in *Euparia*: *Scarabaeus stercorator* Fabricius, 1775 (cited as 'Aph. stercoratori F.') and the two new species *Euparia atramentaria* and *Euparia catenulata*. These species are currently included in the genus *Ataenius* Harold, 1867.

The generic name *Auperia* was used by Chevrolat (1864) for *Scarabaeus stercorator* Fabricius, 1775 and the four new species *Auperia denominata, A. rhyticephala, A. sulcatula*, and *Auparia* (sic) *terminalis*. '*Auparia*' here is a lapsus for *Auperia*, as is evident from the 'Liste, dans l'ordre méthodique, des genres et des espèces" (Chevrolat, 1864, p. 418) where all four species are listed in combination with *Auperia.* Stebnicka (2002) designated *A. denominata* as type species of *Auperia* Chevrolat, 1864. The other three species described by Chevrolat are currently included in the genus *Ataenius* Harold, 1867.

Auperia Chevrolat, 1864 is a junior homonym of *Auperia* Jacquelin du Val, 1857 and is therefore permanently invalid. However, the name *Phalangochaeta* Martínez, 1952 (type species *Ataenius angusticollis* Schmidt, 1909, by original designation) is available for this genus.

Accordingly, in addition to the requests in the application by Howden & Smetana, the International Commission on Zoological Nomenclature is asked:

(1) to use its plenary power to give the name *Ataenius* Harold, 1867 precedence over the name *Auperia* Jacquelin du Val, 1857, whenever the two are considered to be synonyms.

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Auperia* Jacquelin du Val, 1857 (gender: feminine), type species by subsequent designation by Dellacasa (1988) *Scarabaeus stercorator* Fabricius, 1775, with the endorsement that it is not to be given priority over the name *Ataenius* Harold, 1867 whenever the two are considered to be synonyms.
   (b) *Phalangochaeta* Martínez, 1952 (gender: feminine), type species by original designation *Ataenius angusticollis* Schmidt, 1909.

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *angusticollis* Schmidt, 1909, as published in the binomen *Ataenius angusticollis* (specific name of the type species of *Phalangochaeta* Martínez, 1952).
   (b) *stercorator* Fabricius, 1775, as published in the binomen *Scarabaeus stercorator* (specific name of the type species of *Auperia* Jacquelin du Val, 1857).

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Auperia* Chevrolat, 1864, a junior homonym of *Auperia* Jacquelin du Val, 1857.

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Comment on the proposed emendation of spelling of CORYSTIDAE Foster & Philip, 1978 (Echinodermata, Echinoidea) to remove homonymy with CORYSTIDAE Samouelle, 1819 (Crustacea, Brachyura)

(Case 3419; see BZN **65**: 114–118)

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My colleagues, René H.B. Fraaije, Barry W.M. van Bakel (both Oertijdmuseum De Groene Poort, Boxtel, the Netherlands), Pedro Artal (Museo Geológico del Seminario de Barcelona, Spain), Danièle Guinot (Muséum national d'Histoire naturelle, Paris) and I agree wholeheartedly with Christopher Boyko's application (Case 3419) to emend the echinoid family name to CORYSTUSIDAE, so as to remove homonymy with the decapod family CORYSTIDAE. In fact, we had noted this homonymy ourselves recently and were about to submit an application.

Perhaps it should be added that the decapod genus *Corystes* is monospecific, and that the type species *C. cassivelaunus* is a North Sea and Mediterranean form, with a fossil record going back to the Pliocene, at least in the North Sea Basin (van Bakel et al., in press).

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Comment on the proposed suppression of *Gobius lagocephalus* Pallas, 1770 (Osteichthyes, Teleostei, GOBIIDAE)

(Case 3383; see BZN **64**: 103–107, **65**: 57–60, 150–151)

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A suppression of *Gobius lagocephalus* Pallas, 1770 is unnecessary and would cause instability in the nomenclature of the genus *Sicyopterus*. In accordance with the

preamble of the Code, and for the sake of stability, I would like to express my disagreement with the proposed suppression of the name *Gobius lagocephalus* Pallas, 1770 and my agreement with Kottelat, Larson, Watson & Keith's (BZN **65**: 57–60) proposal to retain the present usage.

Comments on the proposed conservation of *Buettneria* Case, 1922 (Amphibia)
(Case 3420; see BZN **64**: 252–254, **65**: 60–62, 217–219)

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I endorse Lucas et al.'s (2007) application to conserve the long- and commonly used name of the Late Triassic temnospondyl *Buettneria* Case, 1922, in spite of objections raised by Hausdorf (2008, BZN **65**(1): 61–62). Abandoning this widely used name in favor of the essentially unused homonyms *Buettneria* Simroth, 1888 and *Buettneria* (=*Büttneria*) Karsch, 1889 would destabilise zoological nomenclature.

Hausdorf (2008) is correct that Simroth (1888) did propose the name *Buettneria* for a urocyclid gastropod before Karsch (1889) proposed *Büttneria* (=*Buettneria*) for an orthopteran insect. However, Simroth did not describe the taxon until later (Simroth, 1890), and thus his proposal of the replacement name *Buettnerella* Simroth (1910) can be viewed as an implicit understanding that Karsch described the orthopteran prior to Simroth's description of the gastropod. Even if *Buettneria* Simroth is considered senior to *Buettneria* Karsch, Simroth's name only appeared in compendia and faunal lists (Cockerell, 1893, Heynemann, 1906, Thiele, 1931, Zilch, 1959) until the work of Van Goethem (1975, 1977) and Schileyko (2002), thereby failing to meet the criteria to determine usage set forth in Article 23.9. The online Zoological Record database suggests that Mollendorf (1890) also published the name *Buettneria leuckharti*, but this is apparently an error in the database, as Mollendorf (1890), while covering similar taxa, makes no mention of *Buettneria*, nor does he cite Simroth. The following paragraphs demonstrate the near-total lack of usage of Simroth's name and the problematic nature of discriminating between Simroth's and Karsch's.

Simroth (1888, p. 87) clearly was the first to establish the generic name *Buettneria* and the species *B. leuckharti* and even provided a diagnosis ('Wie die vorige, aber eine mit dem Penis verbundeenen Pfeildrüse'). However, he did not designate a type until later. (Simroth, 1890) when he also used the abbreviations n. g. and n. sp. to designate *Buettneria leuckharti* as a new taxon. He provided an etymology for both the generic and specific names, indicated that there was a type specimen and illustrated it (Simroth, 1890, pl. 3, figs. 3, 7, 16). However, between his initial use of the name (Simroth, 1888) and more formal description (Simroth, 1890), Karsch had described the orthopteran *Büttneria*, as documented by Mueller (2006) and Lucas et al. (2007). Thus, in 1910 Simroth appeared to concede that *Buettneria* was preoccupied and designated the new name *Buettnerella* (Simroth, 1910, p. 611), which he used for that taxon in the few other instances it appeared in that publication and was subsequently used in a faunal list by Pilsbry (1919, p. 300).

The only gastropod work to address Simroth's concept of *Buettneria* is relatively recent. Van Goethem (1975) named several taxa, including a new species, *B.*

garambaensis, prior to a more thorough treatment of the subfamily UROCYCLINAE (Van Goethem (1977). Since then only Schileyko (2002) has reviewed the genus, naming the tribe BUETTNERIINI Schileyko to encompass the genera *Elisolinax* Cockerell, *Nuphus* Van Goethem, *Bukobia*, Simroth, and *Buettneria* Simroth. This is the entire taxonomic history of *Buettneria* Simroth, demonstrating that the name has only been used in three contributions to taxonomic literature (Van Goethem, 1975, 1977; Schileyko, 2002). All other uses are faunal lists, maps, and compendia, and the only taxonomic work between Simroth (1890) and Van Goethem (1975) is Simroth (1910), in which he expressly uses the name *Buettnerella*. Thus *Buettneria* Simroth fails to satisfy the criteria of usage set forth in Article 23.9.

In contrast to the occasional listing of either the urocyclid gastropod or the orthopteran insect, Lucas et al. (2007) documented more than 75 usages of *Buettneria* as the name for a Triassic temnospondyl in the literature. I have found a further 25 usages of *Buettneria* in the same context and this list has also been lodged with the ICZN Secretariat. In addition to the primary literature and textbooks cited by Lucas et al. (2007), the holotype of *Buettneria* is commonly used in phylogenetic analyses of metoposaurid ingroup relationships (e.g. Davidow-Henry, 1989; Hunt, 1989, 1993) as well as the phylogenetic position of metoposaurs within Temnospondyli generally (Yates & Warren, 2000). Because of the abundant material of *Buettneria* known from multiple bonebeds in the American Southwest (Case, 1932; Romer, 1939; Colbert & Imbrie, 1956) the name is entrenched not only in the literature of Late Triassic amphibians, including major systematic treatments (e.g. Hunt, 1993; Sulej, 2007), but it is and continues to be the standard name applied to Late Triassic metoposaurid temnospondyls for comparisons with other taxa (e.g. Pawley & Warren, 2005, 2006; Pawley, 2007; Ruta et al., 2007; Schoch, 2008). A list of Lucas et al. (2007, pers. comm.) and other sources shows that the name *Buettneria* Case has been used throughout its history, and with increasing regularity, from three references in the 1920s to more than 29 in the present decade. Indeed, *Buettneria* Case was used by other workers in the 1920s (Branson & Mehl, 1928, 1929) and, with 27 references from 1922 to 1972, never went more than five years without at least one mention in the scientific literature. Importantly, not only are four of the references cited in this paragraph in addition to the list provided by Lucas et al., (2007), but most of these authors refer to the temnospondyl throughout their papers (e.g. Sulej, 2007). Thus, not only is the name entrenched in the literature, but also individual citations utilise the name repeatedly, so that the total number of usages in the literature is vastly larger than the nearly 100 references tabulated by Lucas et al. (2007) and myself. This shows that the usage of *Buettneria* to describe a temnospondyl amphibian is not only common and entrenched in the literature, but that it continues to be used at an ever-increasing rate.

Indeed, the instructions to authors in the Bulletin of Zoological Nomenclature request that, where possible, ten or more reasonably recent references should be given illustrating the usage of names that are to be conserved or given precedence over older names. Lucas et al. (2007) and the references I provide here include at least thirty-five systematic references from the past decade alone.

Finally, although museum exhibits are beyond the purview of the Code, I note that exhibits of *Buettneria* as a temnospondyl amphibian are prominent at the American Museum of Natural History (New York), the United States National Museum

(Washington), University of Michigan Museum of Paleontology (Ann Arbor), the State Museum of Pennsylvania (Harrisburg), the Texas Memorial Museum (Austin), the New Mexico Museum of Natural History and Science (Albuquerque), and the Mesa Southwest Museum (Mesa, Arizona), among others. The usage of the name *Buettneria* in these temnospondyl exhibits clearly reflects curators' awareness of this term in the paleontological literature.

Thus, to best serve the stability and universality of zoological nomenclature, the generic names *Buettneria* Simroth 1888 and *Buettneria* Karsch, 1889 should be suppressed and the generic name *Buettneria* Case 1922 should be conserved. The generic name *Buettnerella* Simroth 1910 should be applied to the molluscan species *B. leuckharti* Simroth and *B. garambaensis* Van Goethem. The junior subjective synonym *Stenacropteryx* Karsch 1896 remains available for the insect *Buettneria* Karsch 1889.

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I am writing to further elaborate my previous opinion to conserve the Late Triassic metoposaurid genus *Buettneria* Case, 1922 in the interest of taxonomic stability. I reject the arguments put forth by Mueller (2008) and concur with Lucas et al. (2008) that the African gastropod generic name *Buettneria* Simroth, 1888 is a long-standing nomen oblitum. In the interest of retaining stability in nomenclature, I also support the recent petition of Lucas et al. (2008) to suppress the name *Buettneria* Simroth, 1888 because of the availability of the name *Buettnerella* Simroth, 1910.

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The comment of Mueller (BZN **65**: 217) that the name *Buettneria* Case, 1922 has repeatedly been synonymised with other metoposaurid genus names in the past renders the justification of the suppression of the snail name *Buettneria* Simroth, 1888 in favour of the junior homonym even more doubtful. *Buettneria* Case, 1922 can be replaced by *Koskinonodon* Branson and Mehl, 1929, as proposed by Mueller, without threatening the stability of nomenclature, even though *Buettneria* Case, 1922 has been used more often than *Buettneria* Simroth, 1888. The rating of *Buettneria* Simroth, 1888 as a 'virtual nomen oblitum' by Lucas et al. (BZN **65**: 218) is unwarranted. The term 'nomen oblitum' is clearly defined in Article 23.9 of the Code. *Buettneria* Simroth, 1888 has been in general use since Van Goethem (1975, 1976, 1977a, b) and, thus, does not fulfil the conditions of Article 23.9.1.1. Although Lucas et al. cited Schileyko (2002), they did not mention another undesirable consequence

of suppressing the name *Buettneria* Simroth, 1888. Schileyko (2002) established the family-group name BUETTNERIINI based on *Buettneria* Simroth, 1888. If the Commission decided to suppress *Buettneria* Simroth, 1888 the name BUETTNERIINI Schileyko, 2002 would also become invalid under Article 39 of the Code and would have to be replaced by a new name, if considered necessary.

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Comment on the proposed conservation of usage of *Archaeopteryx lithographica* von Meyer, 1861 (Aves) by designation of a neotype

Case 3390; see BZN **64**(3): 182–184, **64**(4): 261–262

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I agree with the objective of the applicants and the commentators (Bock & Bühler (BZN **63**(3): 182–184) and Barrett & Milner (BZN **63**(4): 261–262) to conserve the name *Archaeopteryx lithographica* in its accustomed sense, i.e. as typified by the 'London specimen' (BMNH 37001) for all the reasons stated by these authors. However, insufficient consideration has been given to the questions 1) in which publication the name *Archaeopteryx lithographica* was actually made available under the Code, and 2) which specimen(s) constitute the type series.

The nomenclatural history of the name *Archaeopteryx lithographica* has been described by Swinton (1960) in this journal, but some points are here restated as his account contains some errors and omissions. As to the present application, the authors take it as given that the holotype is the fossil feather described by von Meyer (1861a, 1862a, 1862b) and the name was made available by von Meyer, 1861b. As we shall see this view is not necessarily correct on both points. The relevant publications are treated in chronological order.

Meyer, 1861a (p. 561) (post 15.8.1861): In a letter dated 15 August 1861 to H.G. Bronn, one of the editors of '*Neues Jahrbuch für Geologie* etc.', and published in part 5 of the 1861 volume, von Meyer described a fossil feather from the Late Jurassic lithographic limestone of Solenhofen [modern spelling: Solnhofen], southern Germany, but did not give it a name.

Meyer, 1861b (pp. 678–679) (post 10.10.1861): In another letter to Bronn, dated 30 Sept 1861 and published in part 6 of the 1861 volume, von Meyer wrote the following, here quoted in translation from the German original text. This text is regarded by most authors as the original reference to the name *Archaeopteryx lithographica*: 'As a supplement to my letter from the 15th of last month I can now tell you that I have

studied the feather from Solenhofen from all angles, and thereby I arrived at the conclusion that it is a true fossil from the lithographic slate and that it agrees completely with a bird's feather. At the same time I received news from Obergerichtsrat [a rank in the judiciary] Witte that an almost complete skeleton of an animal covered in feathers had been found in the lithographic slate. It shows several deviations from our living birds. The feather which I studied I will publish with an exact illustration. For the denomination of the animal I consider the term *Archaeopteryx lithographica* as appropriate'. From this text it should be noted that 1) the skeleton find (the later BMNH specimen no. 37001) is not described, diagnosed or characterised by even a single word, nor is an indication to such characterisation given and 2) von Meyer refers only the feather to a species of fossil bird, but the skeleton merely to 'an animal covered in feathers'. It is ambiguous whether the animal von Meyer referred to is the animal which produced the feather he studied, or to the animal which produced the skeleton specimen, and whether he considered them conspecific. Thus, von Meyer's last sentence can be interpreted in three different ways, with resulting different conclusions as to the availability of the name, and the constituents of the type series:

Alternative (1): If von Meyer's last sentence meant: 'For the denomination of the animal species which produced my feather (and to which the skeleton find – which I have not seen – may or may not belong) . . .', the feather would be the only definitely included material and hence the holotype of the nominal species *Archaeopteryx lithographica*; this name would have been made available in this publication, as von Meyer references his earlier (1861a) description of the feather.

Alternative (2): 'For the denomination of the animal represented by the skeleton specimen (to which species my feather belongs), . . .', then the feather and the skeleton constitute the type series, but only the feather is described. It is then questionable whether the name *Archaeopteryx lithographica* was made available as the essential part of the type series was not characterised.

As a third possibility von Meyer's text can be interpreted as 'For the denomination of the animal represented by the skeleton specimen (to which species my feather may or may not belong), . . .' In this case the feather cannot be part of the type series as being only questionably included; and as the only included item, the skeleton, was not described, the name *Archaeopteryx lithographica* would be a nomen nudum in this publication.

Meyer's ambiguity stems doubtless from the fact that he had not seen the skeleton and was thus circumspect about any statement about it. Furthermore, as an experienced vertebrate palaeontologist and an authority in his time, it is a safe assumption that he considered it inappropriate to base a new species of bird on the description of a single feather. Thus, if von Meyer's likely intentions are guiding the nomenclatural interpretation of his paper, a fourth interpretation is possible: the nominal species *Archaeopteryx lithographica* in von Meyer 1861b is not based on the feather; von Meyer expected that either the skeleton already found or a find yet to be made would eventually be matched with his feather, and he just preempted the naming with what he considered an appropriate name which is nonetheless a nomen nudum at this stage.

Anonymous, 1861–1862 (late 1861, or possibly early 1862): While letters to the editors of *Neues Jahrbuch* were published without a title, the editors made up titles

for the index of the volume. In this index the name *Archaeopteryx lithographica* is unequivocally linked to the feather ('*Archaeopterix lithographica* (bird's feather) and *Pterodactylus* from Solnhofen'). Thus, if this name is interpreted as a nomen nudum in von Meyer, 1861b, as in the alternative interpretations (3) and (4) given above, it would become available from this caption. The feather would then be part of the type series; whether or not the skeleton specimen formed the other part of the type series, will depend on the interpretation of von Meyer's text, alternatives (1) and (2). The authorship would still go to von Meyer, but may need to be quoted as von Meyer in Anonymous, 1861'. It is clearly undesirable to have names made available in this way. Further, it would remain uncertain whether this index were actually published before the paper of Wagner, 1862a (see below).

Wagner, 1862a: A. Wagner '1861' [20 January 1862] (146–154) provided many anatomical details about the skeleton specimen, which had been related to him by Witte and an unnamed expert. He discussed the affinities of this specimen and concluded it to be a reptile. The name *Griphosaurus*, proposed by Wagner for this skeleton, fulfills the requirement of being accompanied by a description, to be available. Wagner quoted only von Meyer's first letter (1861a) in his presentation to the Bavarian Academy of Sciences on 9 November 1861; the subsequent issue of *Neues Jahrbuch* with von Meyer's second letter (1861b) had certainly not been published at this time, because this issue contains letters dated up to 10 October 1861. Wagner's paper must have been published after 9 November 1861; from external sources a date of 20 January 1862 has been proposed (Swinton 1960, p. 225), therefore the date of the name should be quoted in angular brackets. A translation into English of Wagner's paper appeared shortly afterwards (Wagner, 1862b; April 1862). The name *Griphosaurus* Wagner, [1862a] is the earliest genus-group name which is unequivocally available for the taxon known as *Archaeopteryx.*

H. von Meyer, 1862a (April 1862) (pp. 54–56, pl. 8 fig. 3) described and figured the fossil feather, and discussed the significance of this find. In this context he mentions at the end of the article the skeleton find and describes its anatomical characteristics according to communications received from Witte and Oppel, i.e. he still had not seen the skeleton himself. The name *Archaeopteryx lithographica* is only mentioned in the title and at the end of the paper. The last two sentences of this paper read, translated from German: 'Already from the simple middle foot can be concluded that this animal does not belong to the Pterodactyls, and the formation of the tail opposes the notion which we have of birds; and yet the feathers cannot be distinguished from those of birds. The fossil feather presented by me may come from a similar animal, for which I have chosen the denomination *Archaeopteryx lithographica* (Jahrb. für Mineral., 1861, p. 679)'. A translation into English was published shortly afterwards (von Meyer, 1862b, May 1862). Thus von Meyer confirmed that he included the feather in the nominal species *Archaeopteryx lithographica*; whether the skeleton specimen was included depends on the interpretation of the term 'animal': it could mean another individual of the same species to which the skeleton belonged, in which case the skeleton was included in the nominal species; or it could mean a species (as yet undiscovered) similar to the species to which the skeleton belonged. Thus the ambiguity in von Meyer's taxonomic concept remains.

In order to conserve the name *Archaeopteryx lithographica* in its accustomed sense by designating the London specimen as the type specimen, an additional action is

required by the Commission, viz. to remove the ambiguities inherent in von Meyer's letter (1861b), concerning the availability of the name. The International Commission on Zoological Nomenclature is accordingly asked to use its plenary power to rule that both the generic and specific names *Archaeopteryx* and *lithographica* have been made available by von Meyer, 1861b.

Below are the correct references for the names *Archaeopteryx*, *Griphosaurus*, *Archaeopteryx lithographica*, *Griphosaurus problematicus* and *Griphornis longicaudatus*:

Archaeopteryx von Meyer, 1861, *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefakten-Kunde*, **1861**(6), pp. 678–679 [not p. 578].

Griphosaurus Wagner, [1862], *Sitzungsberichte der Königlichen Bayerischen Akademie der Wissenschaften zu München, Mathematisch-naturwissenschaftliche Klasse*, **2**(2): 153.

lithographica von Meyer, 1861, as published in the binomen *Archaeopteryx lithographica, Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefakten-Kunde*, **1861**(6), pp. 678–679 [not p. 578].

problematicus H. Woodward, 1862, as published in the binomen *Griphosaurus problematicus, Intellectual Observer*, **2** (December 1862): plate legend [not p. 317].

longicaudatus H. Woodward, 1862, as published in the binomen *Griphornis longicaudatus, Intellectual Observer*, **2** (December 1862), p. 317, plate legend [p. 317 was omitted].

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Wagner, A. 1862b. On a new fossil reptile supposed to be furnished with feathers. *Annals and Magazine of Natural History*, (3)**9**(52): 261–267 [IV. 1862].

Woodward, H. 1862. On a feathered fossil from the lithographic limestone of Solenhofen. *The Intellectual Observer. Review of Natural History, Microscopic Research, and Recreative Science*, **2**(v): 313–319, pl. 1 [XII. 1862].

Corrigendum

Please note that the correct spelling of the generic name conserved for a genus of doradid fish is *Platydoras*, rather than *Polydorus* or *Platydorus* as stated in the Abstract and Keywords of Opinion 2209 (Case 3382) (BZN **65**: 237).